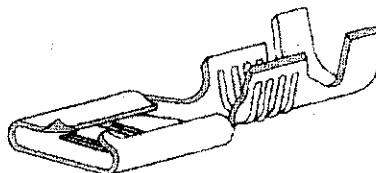


L.I.F. RECEPTACLE CONTACT, .250" SERIES.

**1. SCOPE:****1.1 Content**

This specification covers the performance requirements for L.I.F. Rec. Contact, Straight Version. Sizes are designed to correspond to the mating tab width of 6.3 mm. With hole, according to the IEC 760.

Product base number involved: 100605 & 188120.

These terminals are suitable for applications in which low insertion forces are needed.

1.2 Qualification

When test are performed on the subject product line, the procedure specified in this Product Specification shall be used.

All inspection shall be performed using the applicable inspection plan and product drawing.

2. APPLICABLE DOCUMENTS

The following documents form a part of this specification to the extent specified herein. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence.

In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

For test reports contact Engineering.

2.1. AMP Specification:

114-20023

:Application specification

2.2. Commercial Standards:

IEC-68

: Basic environmental testing procedures

IEC-512

: Basic testing procedures and measuring methods for electromechanical components for electric equipment

IEC-760 (1989)

: Flat quick-connect terminations, tabs with hole

DIN 46244

: Tabs for receptacle, only tabs with hole

3. REQUIREMENTS:**3.1. Design and Construction:**

Terminals shall be of the design, construction and physical dimensions specified on the applicable product drawing.

Product Code: 1110

B2	REVISED ET00-0127-01	H.Y.	15 MAY 2001	C.T.	15 MAY 2001
B1	REVISED & RETYPED ET00-0243-00	H.Y.	27 SEP 2000	C.T.	27 SEP 2000
rev letter	rev. record	DR	Date	CHK	Date
DR. H. YAALI	DATE	APVD C. TARTARI			DATE

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LOC I

3.2. Materials:

- A. Contact material brass AMP Spec. 100-086.
The material meet of exceed the equivalent requirements specified in international standards:
ASTM-B-36
UNS-C26000
DIN-17760
- B. Nickel silver according to AMP Spec. 100-41000
- C. Steel according to AMP Spec. 100-021
- D. Plating tin/nickel

3.3. Wire: For nickel plated wire, consult AMP

3.4. Ratings:

- A. **Current:** 16 Ampere
- B. **Operating temperature:** -40°C to +105°C for tin plated brass/phosphor bronze
Max. 180°C for new silver
Max. 250°C for nickel plated steel

3.5. Performance and Test Description:

Para.	Test description	Performance or severity		Procedure
3.5.1	Examination of product	Meets requirements of product drawing and AMP Spec. 114-2036		Visual, dimensional and functional per applicable inspection plan.
3.5.2	Crimp tensile strength	Conductor area (mm ²)	Minimum strength (N)	Terminals crimped on wires with insulation support ineffective. Speed of tensile testing machine between 25 and 50 mm/min. Test until breakage or pull-out. IEC 512-8 test 16d.
		1.0	160	
		1.5	200	
		2.5	250	
3.5.3	Insertion force (*)	Individual max. 50N Average max. 45N		Measure force to push terminal onto test tab at a rate of 100 mm/min. IEC 512-7 test 13b.
3.5.4	Withdrawal force (*)	Individual min. 15N Average min. 20N		Measure force to pull terminal from tab at a rate of 100 mm/min. IEC 512-7 test 13b.
3.5.5	Mechanical Endurance	6 cycles		Mate and unmate terminal with test tab by appropriate machine speed 100 mm/min.

- (*) Insertion and withdrawal forces:
- the tin plated brass version will be measured with tin plated brass test tabs, P/N 160947-1.
 - the steel and new silver versions will be measured with nickel plated steel test tabs.

3.5 Performance and Test Description (cont'd):

Para.	Test description	Performance or severity			Procedure
3.5.6	Crimp resistance:	Wire	Initial	Aftertest	Measuring points see fig. 1 Millivolt level method. IEC 512-2 test 2a
	Brass tinplated	>1.0-1.5	0.6 mΩ	1.2 mΩ	
	Ph.Br. tinplated	>1.5-2.5	0.47 mΩ	0.94 mΩ	
	Nickel silver	>1.0-1.5	1.8 mΩ	3.6 mΩ	
	Steel Ni-plated	>1.5-2.5	1.4 mΩ	2.8 mΩ	
3.5.7	Contact resistance:	Initial		After test	
	Brass tinplated	0.7 mΩ		1.4 mΩ	
	Ph. Bronze tinplated				
	New Silver	2.1 mΩ		4.2 mΩ	
	Steel Ni-plated				
3.5.8	Temperature rise	Max. temperature rise			Apply test current to wired terminal mated with test tab. Measure temperature with thermocouple probe. IEC 512-3 test 5a
		Tinplated 30°C			
		New silver 40°C			
		Nickelplated steel 40°C			
		Wire	Test current		
		2.5 mm2	16 A		
3.5.9	Vibration	Frequency sweep 10-500-10 Hz. Amplitude 0.75 mm or 10g 2 hours in each axis.			Test tab mounted on vibration machine. Wired terminals mated with tab. wires supported at 10-20 cm length. IEC 68-2-6 test Fc
3.5.10	Current cycling	Duration 500 cycles			Terminals terminated on max. wire 2.5 mm2. Overload test current 24 A. (150% of the nominal test current). One cycle 45 min. on / 15 min. off. Measuring point see fig. 2 IEC 760 para 15.
3.5.11	Temperature humidity cycling	2 cycles			Conditions: Upper temperature: 40°C Lower temperature: 25°C Relative humidity: 95% IEC 68-2-30
3.5.12	Corrosion salt spray	96 hours			Place samples in salt spray chamber with a salt spray solution of 5%. IEC 68-2-11
3.5.13	Corrosion – Industrial air (Kesternich test).	6 cycles SO2 : 2 litre			Place samples in a test chamber with a saturated atmosphere in the presence of sulfurdioxide. DIN 50018/SWF/2.0S
		Temperature: 40°C. Only for tinplated versions			
3.5.14	Dry heat	Temp. 105°C	For tinplated brass		IEC 68-2-2
		Temp. 180°C	For new silver		
		Temp. 250°C	For nickel plated steel		
		Duration 500 h.			

3.6 Test sequence

MECHANICAL TESTS		MEASUREMENTS	Paragraph
GROUP 1	Mechanical Endurance	(first) Insertion Force	3.5.3
			3.5.5
		(tenth) Withdrawal Force	3.5.4
GROUP 2	Tensile strength		3.5.2
GROUP 3	Vibration	Contact resistance	3.5.7
		Crimping resistance	3.5.6
			3.5.9
		Crimping resistance	3.5.6
		Contact resistance	3.5.7

ENVIRONMENTAL TESTS		MEASUREMENTS	Paragraph
GROUP 4	Temperature-humidity cycling Current cycling	Contact resistance	3.5.7
		Crimping resistance	3.5.6
		Temperature rise	3.5.8
			3.5.11
			3.5.10
		Contact resistance	3.5.7
GROUP 5	Corrosion, salt spray	Crimping resistance	3.5.6
			3.5.12
		Contact resistance	3.5.7
		Crimping resistance	3.5.6
GROUP 5 (bis)	Corrosion, Industrial air	Contact resistance	3.5.7
		Crimping resistance	3.5.6
			3.5.13
		Contact resistance	3.5.7
GROUP 6	Dry heat	Crimping resistance	3.5.6
			3.5.14
		Contact resistance	3.5.7
		Crimping resistance	3.5.6

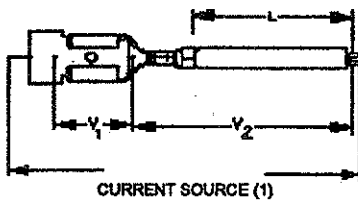


FIGURE 1

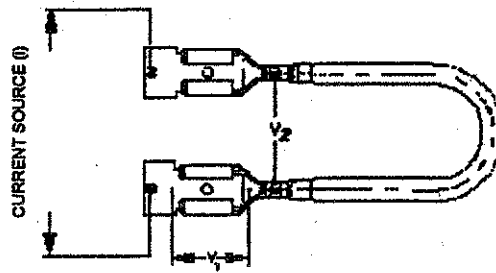


FIGURE 2

4 QUALITY ASSURANCE PROVISIONS:

4.1. Qualification Testing:

A. Sample Selection.

Samples shall be prepared in accordance with applicable Instruction Sheets. They shall be selected at random from current production.

Group 1 shall consist of 20 samples, wire-size not relevant.

Group 4 and 6 shall consist of 20 samples, wired with maximum wire-size.

Group 2, 3 and 5 shall consist of 20 samples per wire size.

B. Test Sequence

Qualification Inspection shall be verified by testing samples as specified in Paragraph 3.5.

4.2 Requalification testing:

If changes significantly affecting form, fit or function are made to the product or to the manufacturing process, product assurance shall coordinate requalification testing, consisting of all or part of the original testing sequence as determined by development/product, quality and reliability engineering.

4.3 Acceptance

Acceptance is based on verification that the product meets the requirements of Paragraph 3.4. failures attributed to equipment, test set-up or operator deficiencies shall not disqualify the product. When product failure occurs, corrective action shall be taken and samples resubmitted for qualification. Testing to confirm corrective action is required before resubmittal.

4.4 Quality Conformance Inspection

The applicable AMP quality inspection plan will specify the samples acceptable quality level to be used. Dimensional and functional requirements shall be in accordance with applicable product drawing and this specification.